

IN THE CLAIMS

1 – 6. (canceled)

7. (currently amended) A torsion oscillator scanner comprising:

a light beam source producing a light beam,

a plate member disposed in the path of the light beam having a non-rectangular shape
selected from the group of elliptical, oval, racetrack, or circular, the plate member

5 having an upper surface, a lower surface, and a rotational axis and opposite edges,

a frame disposed in a spaced apart relation to the lower surface of the plate member,

a mount for holding the plate member adjacent the frame, said mount including a pair of
torsion springs extending in opposite directions from the opposite edges of the

10 plate member and being rigidly attached to the frame. the torsion springs being
positioned coaxially along the axis of rotation of the plate member.

a reflective surface located on a surface of the plate member for reflecting ~~a~~ the light
beam,

at least one magnet disposed on the plate,

at least one coil located on the frame and configured for inducing electromagnetic force

15 on the at least one magnet when alternating current is applied to the at least one
coil to thereby oscillate the reflective surface to a rotational angle of oscillation at
an oscillation frequency to scan the light beam through a scanning pattern in at
least first and second directions at the oscillation frequency, and

wherein the reflective surface comprises a mirror having an optical power.

8. (original)The torsion oscillator scanner of claim 7 wherein the reflective surface
comprises a concave mirror.

9. (original)The torsion oscillator scanner of claim 7 wherein the reflective surface
comprises a Fresnel lens mirror.

10. (original)The torsion oscillator scanner of claim 7 wherein the plate member further includes one or more diffractive optical surfaces having reflective properties.

11. (currently amended)A torsion oscillator scanner comprising:

a light beam source producing a light beam,

a plate member disposed in the path of the light beam having a non-rectangular shape selected from the group of elliptical, oval, racetrack, or circular, the plate member

5 having an upper surface, a lower surface, and a rotational axis and opposite edges,

a frame disposed in a spaced apart relation to the lower surface of the plate member,

a mount for holding the plate number adjacent the frame, said mount including a pair of torsion springs extending in opposite directions from the opposite edges of the plate member and being rigidly attached to the frame, the torsion springs being

10 positioned coaxially along the axis of rotation of the plate member,

a reflective surface located on a surface of the plate member for reflecting a light beam,

at least one magnet disposed on the plate,

at least one coil located on the frame and configured for inducing electromagnetic force on the at least one magnet when alternating current is applied to the at least one coil

15 to thereby oscillate the reflective surface to a rotational angle of oscillation at an oscillation frequency to scan the light beam through a scanning pattern in at least first and second directions at the oscillation frequency, and

wherein the reflective surface comprises multiple mirrors, each mirror having different reflective properties.

12-26. (Cancelled)

27. (New) The scanner of claim 11 wherein said torsion springs and coil are configured to provide greater than about plus or minus fifteen degrees of oscillation of the plate during operation.

28. (New) The scanner of claim 11 wherein said torsion springs and coil are configured to oscillate the plate during operation at about 2.6 kHz.

29. (New) The scanner of claim 11 wherein said torsion springs and coil are configured to provide greater than about plus or minus fifteen degrees of oscillation of the plate during operation and are configured to oscillate the plate during operation at about 2.6 kHz.

30. (New) The scanner of claim 7 wherein said torsion springs and coil are configured to provide greater than about plus or minus fifteen degrees of oscillation of the plate during operation.

31. (New) The scanner of claim 7 wherein said torsion springs and coil are configured to oscillate the plate during operation at about 2.6 kHz.

32. (New) The scanner of claim 7 wherein said torsion springs and coil are configured to provide greater than about plus or minus fifteen degrees of oscillation of the plate during operation and are configured to oscillate the plate during operation at about 2.6 kHz.